CARBOHYDRATE RESEARCH, VOL. 193 (1989)

AUTHOR INDEX

ABBAS, S. A., 125
ANTONAKIS, K., 307
APPELMELK, B. J., 257
AUGÉ, C., 288

BABIANO CABALLERO, R., 314
BACKINOWSKY, L. V., 75
BASSI, R., 141
BATTA, G., 275
BRADE, H., 257
BRADE, L., 257

CHAKRABORTY, A. K., 147
CHOPLIN, L., 215
CONTOUR, M.-O., 283
CORRÊA, J. B. C., 23
CRAWLEY, S. C., 249
CYONG, J.-C., 193, 201

DE LEDERKREMER, R. M., 49
DEFAYE, J., 283
DEPEW, W. T., 91
DESCOTES, G., 61
DOUBLIER, J.-L., 215
DUTTON, G. G. S., 147, 157

EL KHADEM, H. S., 303
ENGLAND, T. M., 105
ENNIFAR, S., 303

FORSTNER, M., 294
FORTIER, S., 1
FREYTAG, K., 294
FUENTES MOTA, J., 314

GARCIA FERNANDEZ, J. M., 314
GAUTHERON, C., 288
GORIN, P. A. J., 23
GUILLOUX, P., 61

HANAYA, T., 9
HASEGAWA, A., 323
HATANO, K., 271
HAY, G. W., 91
HINDSGAUL, O., 249
HORTON, D., 49
HRONOWSKI, L. J. J., 91

ISHIDA, H., 323

JANNSSON, P.-E., 322

KAMEYAMA, A., 323
KANIE, O., 271
KENNE, L., 322
KHAN, S. H., 125
KINZY, W., 33
KISHIDA, E., 227
KISO, M., 323
KIYOHARA, H., 173, 193, 201
KOCHETKOV, N. K., 75
KONDO, Y., 279
KÖPPER, S., 296
KOSMA, P., 257
KREBS, A., 91
KUHN, H.-M., 257
KUSUMOTO, S., 257

LAFONT, D., 61
LAMONTAGNE, L. R., 249
LECLERCQ, F., 307
LEVY, M., 115
LITTLE, M., 283
LUGER, P., 9

MATTA, K. L., 125
MEDAKOVIĆ, D., 275
MERAT, S., 105
METORI, A., 165
MILJKOVIĆ, D., 275
MISAKI, A., 227

NAGASAWA, K., 165
NAIM, M., 115
NG, S. K., 147
NIN, A., 49

OGAMO, A., 165
OGIHARA, Y., 271
ORTIZ MELLET, C., 314
OVERTON, B. W., 105
OXLEY, D., 241

PALCIC, M. M., 249
PAROLIS, H., 147, 157
PAROLIS, L. A. S., 147, 157
PASCHKE, E., 294
PAULSEN, H., 257
POLACHECK, I., 115
PORA, H., 288
PRADERA ADRIAN, M. A., 314

RATCLIFFE, R. M., 249

REICHER, F., 23
RIBONI, L., 141
RICHTER, T., 9
ROZALSKI, A., 257

SCHMIDT, R. R., 33
SIERAKOWSKI, M.-R., 23
SOINE, P. J., 105
SOINE, W. H., 105
SONE, Y., 227
SONNINO, S., 141
SZAREK, W. A., 1, 91

TAKEDA, T., 271
TETTAMANTI, G., 141
THOMSON, J. K., 49
TROUTON, K., 1
TSVETKOV, Y. E., 75

UCHIYAMA, H., 165

VARELA, O., 49
VUKOJEVIĆ, N., 275

WATSON, K. A., 1
WIDMALM, G., 322
WILKINSON, S. G., 241
WONG, E., 283
WOODS, R. J., 1

YAMADA, H., 173, 193, 201
YAMAMOTO, H., 9

ZEHAVI, U., 115, 296

CARBOHYDRATE RESEARCH, VOL. 193 (1989)

SUBJECT INDEX

1,2-*trans*-2-Acetamido-2-deoxyglycopyranosides, synthesis *via* 1,2-*trans*-2-deoxy-2-iodoglycosyl azides of, 61
Acylation of 2-amino-2-deoxy-D-gluconic acid, confirmation of the structures of the products obtained, 49
Alfalfa-root saponin, isolation, synthesis, and an antifungal activity of, 115
2-Amino-2-deoxy-D-gluconic acid, confirmation of the structures of the products obtained on acylation, 49
Amylose gelation, a rheological description of, 215
Angelica acutiloba Kitagawa, relationship between structure and activity of an anti-complementary arabinogalactan from the roots of, 193
Angelica acutiloba Kitagawa, structure of an anti-complementary arabinogalactan from the root of, 173
1,5-Anhydro-4,6-*O*-benzylidene-D-galactitol, selective, esterification of, 279
Antibodies, monoclonal, against inner core region of bacterial, lipopolysaccharides, determination of epitope specificity of, 257
Anti-complementary pectic polysaccharides from *Angelica acutiloba* Kitagawa, relationship between structure and activity of the "ramified" region in, 201
Arabinogalactan from the roots of *Angelica acutiloba* Kitagawa, relationships between structure and activity of an anti-complementary, 193
Arabinogalactan, from the roots of *Angelica acutiloba* Kitagawa, structure of an anti-complementary, 173

Barbiturates, synthesis of *N*-β-D-glucopyranosyl derivatives of, 105
6-Benzylamino-6-deoxy-1,2,3,4-di-*O*-isopropylidene-α-D-*glycero*-D-*galacto*-heptopyranurononitrile, conformation of the six- and five-membered rings in, 23
Blood-group specificity, a plant fucosyltransferase with human Lewis, 249

Capsular antigen of *Escherichia coli* O8:K8:H4, structure of the, 157
Ceramide, sialyl lactotetraosyl, total synthesis of, 323
Conformation of the six- and five-membered rings in 6-benzylamino-6-deoxy-1,2,3,4-di-*O*-isopropylidene-α-D-*glycero*-D-*galacto*-heptopyranurononitrile, 23
Convenient route to 6-functionalized derivatives of D-glucal, 275
Crystal structures of 1,2,3,4,6-penta-*O*-acetyl-5-deoxy-5-[(*R*)-methoxyphosphinyl]-β-D-glucopyranose and its 5-[(*R*)-ethylphosphinyl] congener, 9

5-Deoxy-5-(hydroxyphosphinyl)-D-glucopyranoses, improved synthesis, 9
1,2-*trans*-2-Deoxy-2-iodoglycosyl azides, synthesis of 1,2-*trans*-2-acetamido-2-deoxyglycopyranosides *via*, 61
6-Deoxy-L-*arabino*-hexulose, facile preparation from L-rhamnose, 303
6-Deoxy-L-fructose, facile preparation from L-rhamnose, 303
Direct fluorination at positions 3′, 4′, and 6′ of β-D-glucopyranosyltheophylline, 307

Escherischia coli O18ac, a revision of the structure of the *O*-antigen polysaccharide from, using computer-assisted structural analysis with the program CASPER, 322
Escherichia coli O8:K8:H4, structure of the capsular antigen of, 157
Esterification of 1,5-anhydro-4,6-*O*-benzylidene-D-galactitol, selective, 279

Fluorination at positions 3′, 4′, and 6′ of β-D-glucopyranosyltheophylline, direct, 307
6-Thio-β-D-Fructopyranose in the crystalline state, conformation of, 1
β-D-Fructopyranose, 6-thio-, in the crystalline state, conformation of, 1
L-Fructose, 6-deoxy-, facile preparation from L-rhamnose, 303
Fucosyltransferase with human Lewis blood-group specificity, a plant, 249

D-Galactopyranosylthioureas, syntheses of partially protected, 314
Ganglioside, lactonization under acidic conditions of GD1b, 141
Gelation, a rheological description of amylose, 215

β-D-Glc*p*NAc-(1→2)-α-D-Man*p* unit, synthesis of oligosaccharides containing the, 125
D-Glucal, a convenient route to 6-functionalized derivatives of, 275
N-β-D-Glucopyranosyl derivatives of barbitals, synthesis of, 105
β-D-Glucopyranosyltheophylline, direct, fluorination at positions 3′, 4′, and 6′ in, 307
D-Glucuronate, methyl (1*R*)-1,2,3,5-tetra-*O*-acetyl-4-*O*-methyl-, methyl acetal, crystal and molecular structure of, 271
Glycans isolated from the lipopolysaccharides of reference strains for *Serratia marcescens* serogroups O16 and O20, structures of neutral, 241
(*R,S*)-Glycerols, *O*-α-lactosyl- and 1-*O*-α-lactosyl-3-*O*-β-lactosyl-, synthesis of, 91
Glycogen, synthesis of the trisaccharide branching-point of, 296
Glycopeptide, sialyl-, enzymic synthesis of, 288
Glycopeptides of the mucin type containing a β-D-Glc*p*NAc-(1→3)-D-Gal*p*NAc unit, synthesis of, 33
Glycopyranosides, 1,2-*trans*-1-thio-, synthesis catalyzed by zirconium(IV) chloride of, 283

Heparin, chemical sulfation of hydroxyl groups of, 165
Highly uneven distribution of *O*-acetyl groups in the acidic D-xylan of *Mimosa scabrella* (bracatinga), 23
Hydroxyl groups of heparin, chemical sulfation of, 165

2-Iodoglycosyl azides, 1-2-*trans*-2-deoxy-, as intermediates in 2-acetamido-2-deoxyglycopyranosides synthesis, 61

Klebsiella K10, a re-investigation of the structure of the capsular polysaccharide of, 147

Lactones, unsaturated, from the acylation of 2-amino-2-deoxy-D-gluconic acid, 49
Lactonization of GD1b ganglioside under acidic conditions, 141
1-*O*-α-Lactosyl-(*R,S*)-glycerols, synthesis of, 91
1-*O*-α-Lactosyl-3-*O*-β-lactosyl-(*R,S*)-glycerols, synthesis of, 91
Lipopolysaccharides, bacterial, determination of epitope specificity of monoclonal antibodies against inner core region of, 257

(1→2)-α-D-Man*p*, β-D-Glc*p*NAc-, unit, synthesis of oligosaccharides containing the, 125
3β-Medicagenic acid β-maltoside, isolation, synthesis, and antifungal activity of, 115
Methyl (1*R*)-1,2,3,5-tetra-*O*-acetyl-4-*O*-methyl-D-glucuronate methyl acetal, crystal and molecular structure of, 271
Monoclonal antibodies against inner core region of bacterial lipopolysaccharides, determination of epitope specificity of, 257
Mucin-type glycopeptides containing a β-D-Glc*p*NAc-(1→3)-D-Gal*p*NAc unit, synthesis of, 33

α-D-Neu*p*5Ac-(2→6)-β-D-Gal*p*-(1→4)-β-D-Glc*p*NAc-(1→4-*N*)-L-Asn, enzymic synthesis of, 288
Neuraminic acid, a simple one-step synthesis of *N*-acetyl-9-*O*-acetyl-, by enzyme transesterification mediated by porcine pancreas lipase in pyridine, 294

Octulosonic, 3-deoxy-D-*manno*-, containing antigens, use for determination of the epitope specificity of monoclonal antibodies of, 257
Oligosaccharides containing the β-D-Glc*p*NAc-(1→2)-α-D-Man*p* unit, synthesis of, 125

1,2,3,4,6-Penta-*O*-acetyl-5-deoxy-5-[(*R*)-methoxyphosphinyl]-β-D-glucopyranose and its 5-[(*R*)-ethylphosphinyl] congener, crystal structures of, 9
5-Phosphinyl-D-glucopyranoses, substituted, improved synthesis and crystal structures, 9
Plant fucosyltransferase with human Lewis blood-group specificity, a, 249
Polysaccharide antigen of *Pseudomonas aeruginosa,* synthesis of a common, as the 6-aminohexyl glycoside, 75
Polysaccharide from *E. coli* O18ac, a revision of the structure of the O-antigen, using computer-assisted structural analysis with the program CASPER, 322
Polysaccharide of *Klebsiella* K10, a re-investigation of the structure of the capsular, 147
Polysaccharides from *Angelica acutiloba* Kitagawa, relationships between structure and activity of the "ramified" region in anti-complementary pectic, 201
Pseudomonas aeruginosa, synthesis of a common polysaccharide antigen of, as the 6-aminohexyl glycoside, 75

Relationship between structure and activity of the "ramified" region in anti-complementary pectic polysaccharides from *Angelica acutiloba* Kitagawa, 201
Relationships between structure and activity of an anti-complementary arabinogalactan from the roots of *Angelica acutiloba* Kitagawa, 193

Rheological description of amylose gelation, 215
Route to 6-functionalized derivatives of D-glucal, a convenient, 275

Saponin from alfalfa root, isolation, synthesis, and antifungal activity, 115
Selective esterification of 1,5-anhydro-4, 6-*O*-benzylidene-D-galactitol, 279
Serratia marcescens serogroups O16 and O20, structures of neutral glycans isolated from the lipopolysaccharides of reference strains for, 241
Sialylglycopeptide, enzymic synthesis of, 288
Starch, synthesis of the trisaccharide branching-point of, 296
Synthesis of a common polysaccharide antigen of *Pseudomonas aeruginosa* as the 6-aminohexyl glycoside, 75
Structure of an anti-complementary arabino-galactan from the root of *Angelica acutiloba* Kitagawa, 173
Structure of 6-benzylamino-6-deoxy-1,2,3,4-di-*O*-isopropylidene-α-D-*glycero*-D-*galacto*-heptopyranurononitrile: conformation of the six- and five-membered rings, 23
Synthesis of partially protected D-galacto-pyranosylthiourea: new D-galactopyranosyl imidazoline-2-thiones and D-galacto-pyranosylaminothiazoles, 314
Structure of the capsular antigen of *Escherichia coli* O8:K8:H4, 157
Structure of the capsular polysaccharide of *Klebsiella* K10 a re-investigation of the, 147
Structure of the O-antigen polysaccharide from *E. coli* O18ac: a revision using computer-assisted structural analysis with the program CASPER, 322
Structures of neutral glycans isolated from the lipopolysaccharides of reference strains for *Serratia marcescens* serogroups O16 and O20, 241
Sulfation, chemical, of hydroxyl groups of heparin, 165
Synthesis of glycopeptides of the mucin type containing a β-D-Glc*p*NAc-(1→3)-D-Gal*p*NAc unit, 33
Synthesis of *N*-acetyl-9-*O*-acetylneuraminic acid by enzymic transesterification mediated by porcine pancreas lipase in pyridine, a simple one-step, 294

(1*R*)-1,2,3,5-Tetra-*O*-acetyl-4-*O*-methyl-D-glucuronate, methyl, methyl acetal, crystal and molecular structure of, 271
1,2-*trans*-1-Thioglycopyranosides, synthesis catalyzed by zirconium(IV) chloride of, 283
Thiourea, imidazoline-2-thione, and amino-thiazole, syntheses of some new D-galacto-pyranosyl derivatives of, 314
Total synthesis of sialyl lactotetraosyl ceramide, 323
Transesterification mediated by porcine pancreas lipase in pyridine a simple one-step synthesis of *N*-acetyl-9-*O*-acetylneuraminic acid by enzyme, 294
Trisaccharide, branching-point of starch and glycogen, synthesis of, 296

X-Ray diffraction data of 6-thio-β-D-fructo-pyranose, 1
D-Xylan, acidic, of *Mimosa scabrella* (bracatinga), highly uneven distribution of *O*-acetyl groups in the, 23

Zirconium(IV)chloride, synthesis of 1,2-*trans*-1-thioglycopyranosides catalyzed by, 283